In a fifth embodiment, being a variation on the fourth embodiment, having a more rigid roof portion, the tubular strip components may be formed as a single extruded composite component comprising an inner elongate base, a first tubular web formed into an upper surface of the base strip; and an outer elongate web having a second electrical conductor in the form of a tubular web of mesh compressed into a lower surface of the outer strip; and first and second elongate nitrol lateral pillars, which may be formed of a more flexible material than the inner and outer strips, connecting the inner and outer strips along their respective first and second sides, so that the inner and outer strips and the nitrol pillars form an overall tubular shape as shown in FIG. **2**, but as a single hollow tubular extrusion, avoiding the need to glue or otherwise connect two separate inner and outer strips together.

As with the first embodiment, the outer strip has a roof portion, which is moveable towards the inner strip to make contact of the first and second electrical conductors when the outer strip is pressed. The compression may be accommodated by the lateral pillars which may be of a more compressible and less rigid material than the outer and inner strips.

General construction and operation of the fifth embodiment is otherwise as described herein with respect to the first embodiment, and fitting or the extruded PVC or silicone strip into the cradling mounting strip is substantially as described hereinbefore.

In yet a further variation, the extruded aluminum base plate could be replaced by a plastics extrusion.

In each of the above embodiments, the outer strip may be replaced by a rigid strip, with the deformability being accommodated by the lateral pillars. Where a light source is not required, the outer strip could be replaced by for example a wooden strip, having an insulating liner, into which the mesh conductor is embedded. Therefore the outer strip could be made of a wide range of materials, including a range of plastics, any form of nitrol, or even wood.

Advantages

Compared to prior art contact strips, specific embodiments herein may give rise to fewer false alarms, since the electrical conductor is partially embedded within the surfaces surrounding the cavity, whereas prior art devices have separate copper strips which may become detached from the cavity roof and/or cavity floor.

Present embodiments having silicone components may have an improved range of temperature operation down to −50° C.

By using an elongate wire mesh electrically conductive strip, this may give improved cut resistance compared to a flat copper strip conductor. In situations where the strip may be liable to knife damage, a wire mesh conductor is more difficult to fully sever than a solid conventional copper conductor. A conductive mesh has more electrical paths than a single copper conductor, and is therefore failure of a single conductor has limited effect on the electrical functionality.

Further, by using a knitted mesh, the strip is more damage resistant than the equivalent woven mesh, due to the higher degree of connectivity between individual strands of the knitted mesh compared to a woven mesh.

Due to the lower conductivity per unit length, of a conductive mesh compared to a solid copper conductor, improved distance measurement resolution may be achieved using the wire mesh compared to a conventional elongate copper strip conductor.

By extruding the electrical conductor together with the material of the upper and lower strips, enhanced memory shape of the strip can be achieved, compared to a product which has a separate electrical conductor bonded to the upper and lower strips. A wider range of strike angle relative to a centre point of the strip can be achieved compared to prior art strips.

In use, the present embodiments are not susceptible to rippling of the user-pressable outer strip, nor to differential expansion or contraction rates of the outer conductor bearing strip relative to the inner conductor bearing strip, since the mesh expands or contracts at the same rate laterally or longitudinally at the same rate as the carrier material into which it is partially embedded.

Embodiments may have an easier manufacturing process than prior art contact strips which require bonding of a flat copper strip to a PVC carrier via a polyester intermediary strip, with the use of glue. The embodiments disclosed herein form the mesh strip with a carrier strip in a single extrusion process.

The invention claimed is:

1. An extended electrical contact strip comprising:

a first elongate strip having first and second longitudinal sides, an upper surface and a lower surface;

a first electrical conductor located on said upper surface of said first elongate strip;

a second elongate strip having first and second longitudinal sides, and a central portion extending between said first and second sides, said central portion having an upper surface and a lower surface;

a second electrical conductor located on said lower surface of said second strip;

said first and second elongate strips forming a cavity there between, such that said first and second electrical conductors lie opposite and spaced apart from each other and such that said first and second electrical conductors can make contact with each other when said first and second elongate strips are urged towards each other;

wherein at least one of said first and second electrical conductors comprises a web of electrically conductive mesh; and

said at least one of said first and second electrical conductors is extruded with a material of a corresponding respective said first or second elongate strip,

comprising a protruding ridge, and an elongate recessed channel each extending along a same side of said contact strip, for engaging said first elongate strip to said second elongate strip.

2. The contact strip as claimed in claim **1**, wherein:

said first conductor comprises a first electrically conductive mesh; and

said second conductor comprises a second electrically conductive mesh.

3. The contact strip as claimed in claim **1**, wherein said second elongate strip comprises a first lateral pillar, and a second lateral pillar, and extending between said first and second lateral pillars a central portion, wherein said central portion spans across said cavity.

4. The contact strip as claimed in claim **1**, wherein said second elongate strip comprises a first elongate lateral pillar and a second elongate lateral pillar

at least one of said lateral pillars comprising a material selected from the set:

Poly Vinyl Chloride (PVC);

Nitrol;

Nitrile;

Nitrite;

Silicone;

Vulcanized silicone;

Rubber;

Vulcanized rubber;